

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
26 May 2006 (26.05.2006)

PCT

(10) International Publication Number
WO 2006/054155 A1

(51) International Patent Classification:
B62D 5/04 (2006.01) **B60K 17/00** (2006.01)

(21) International Application Number:
PCT/IB2005/003444

(22) International Filing Date:
17 November 2005 (17.11.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2004-335043 18 November 2004 (18.11.2004) JP

(71) Applicant (for all designated States except US): **NISSAN MOTOR CO., LTD.** [JP/JP]; 2, Takara-cho, Kanagawa-ku, Yokohama-shi, Kanagawa 221-0023 (JP).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **TOGASHI, Hiroyuki** [JP/JP]; 1-6-8 Hyoue, Amitie-minamino B-201, Hachioji-shi, Tokyo 192-0918 (JP). **MIMURA, Hiroshi** [JP/JP]; Nakamachi 2-9-2-4-4, Machida-shi, Tokyo, 194-0021 (JP). **YONEMOCHI, Yoshihiro** [JP/JP]; Nagatsuda 5-10-32-403, Midori-ku, Yokohama-shi, Kanagawa 226-0027 (JP). **OTA, Keisuke** [JP/JP]; Higashiyamada 245-3, Tsuzuki-ku, Yokohama-shi, Kanagawa 224-0023 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

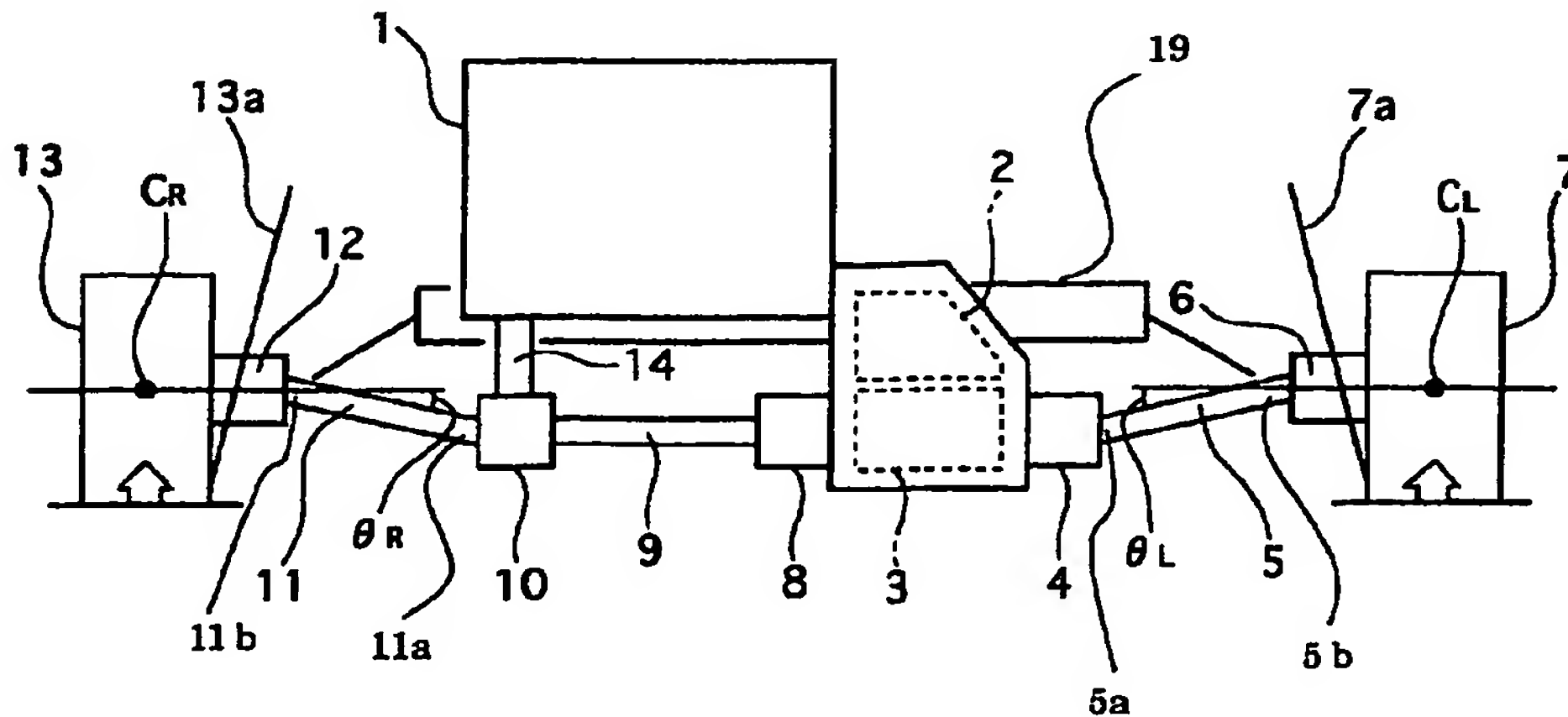
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(U))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(Ui))
- of inventorship (Rule 4.17(iv))

[Continued on next page]

(54) Title: APPARATUS AND METHOD FOR REDUCING TORQUE STEERING



(57) Abstract: An apparatus is provided for suppressing torque steering in a vehicle in which left/right drive shafts are coupled via outer joints to left/right front wheels. The drive shafts are connected via inner joints to an engine and transmission. The height of the inner joints is set 5-20 mm lower than the height of the outer joints, thus forming tilt angles between the left/right drive shafts and the center axis through the left/right wheels and the outer joint. As acceleration of the vehicle increases, the engine moves upward, thus causing the inner joints to move as well. This upward movement of the inner joints causes the tilt angle formed by the drive shafts to decrease. The specific placement of the inner joints is selected so that the left/right tilt angles reach zero at a predetermined rate of acceleration, which may be the vehicle's maximum rate of acceleration.

WO 2006/054155 A1



Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.